

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A vessel suitable for accepting a liquid biological sample, ~~exposing~~
which exposes said sample to a first substance and subsequently a nucleic acid
~~stabilising~~stabilizing agent, said vessel comprising:

- a) a first substance present inside said vessel,
- b) a container in which said ~~stabilising~~stabilizing agent is present,
- c) a connection between the inside of said vessel and the inside of said container,
- d) a physical barrier that temporarily blocks said connection.

2. (Currently amended) ~~A~~The vessel according to claim 1 wherein said first substance is
~~immobilised~~immobilized on part or all of the inside surface of said vessel.

3. (Currently amended) ~~A~~The vessel according to claim 1 wherein said first substance is
~~immobilised~~immobilized on a solid support.

4. (Currently amended) ~~The~~A vessel according to claim 1 wherein said first substance is a liquid.

5. (Currently amended) ~~The~~A vessel according to claim 1 wherein said first substance is a solid.

6. (Currently amended) ~~The~~A vessel according to ~~any of claims 1 to 5~~claim 1 comprising one or
more areas suitable for puncture by a syringe needle.

7. (Currently amended) ~~The~~A vessel according to ~~any of claims 1 to 6~~claim 6 wherein said area is
a re-sealable septum.

8. (Currently amended) ~~The~~A vessel according to ~~any of claims 1 to 7~~claim 1, further comprising
a fitting suitable for receiving a syringe and transmitting the contents therein to the interior of
said vessel.

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9. (Currently amended) TheA vessel according to ~~any of claims 1 to 8~~claim 1, further comprising a fitting suitable for receiving a syringe needle or cannula.

10. (Cancelled)

11. (Currently amended) TheA vessel according to ~~claims 1 to 10~~claim 1, further comprising a valve which is capable of ~~minimising~~minimizing the flow of gas/liquid from the vessel, and allowing the flow of liquid biological sample into the vessel.

12. (Currently amended) TheA vessel according to ~~any of claims 1 to 11~~claim 1, further comprising a means through which displaced gas may be expelled.

13. (Currently amended) TheA vessel according to ~~any of claims 1 to 12~~claim 1 wherein said vessel is held under negative pressure.

14. (Currently amended) TheA vessel according to ~~any of claims 1 to 13~~claim 1 wherein the physical barrier of item d) is opened by the application of physical force to said vessel.

15. (Currently amended) TheA vessel according to claim 14 wherein said force transmits an opening means to said physical barrier.

16. (Currently amended) TheA vessel according to ~~claims 14 and 15~~claim 14 wherein said force irreversibly opens said physical barrier.

17. (Currently amended) TheA vessel according to ~~any of claims 1 to 16~~claim 1 wherein said vessel further comprises an indication for dispensing a known volume of ~~stabilising~~stabilizing agent therein.

18. (Currently amended) TheA vessel according to ~~any of claims 1 to 17~~claim 1 wherein said first substance comprises one or more immune system antigens.

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19. (Currently amended) TheA vessel according to claim 18 wherein said immune system antigens are vaccine components.

20. (Currently amended) TheA vessel according to claim 18 wherein said immune system antigens are antigens which provoke a hyperallergenic response.

21. (Currently amended) TheA vessel according to claim 18 wherein said immune system antigens are one or more selected from the group consisting of histocompatibility antigens, bacterial LPS, tetanous toxoid, a cancer immunotherapy antigen, MAGE-3, a cat allergen, Feld1, antigen presenting cells from an organ donor, an autoantigen, and GAD65.

22. (Currently amended) TheA vessel according to ~~any of claims 1 to 21~~claim 1 wherein said ~~stabilising~~stabilizing agent is an inhibitor of cellular RNA degradation and/or gene induction.

23. (Currently amended) TheA vessel according to claim 22 wherein said inhibitor of cellular RNA degradation and/or gene induction is that as found in a PAXgeneTM Blood RNA Tube.

24. (Currently amended) A method of ~~pulsing a sample of blood with an antigen, subsequently inhibiting cellular RNA degradation and/or gene induction therein and subsequently testing RNA components in the~~ a stabilisedstabilized blood sample ~~so pulsed comprising the use of a which comprises pulsing a sample of blood with an antigen in the vessel according to claim 1, and subsequently inhibiting cellular RNA degradation and/or gene induction therein vessel according to any of claims 1 to 23.~~

25. (Currently amended) A method of testing ~~the~~an immune response of an individual towards an antigen ~~comprising the use of a vessel according to any of claims 1 to 23 wherein the first substance is the antigen under investigation,~~ comprising the steps of:

- a) introducing a sample of blood taken from said individual into the vessel of claim 1,
- b) ~~optionally~~ agitating said vessel,

c) introducing after a pre-determined period of time, said nucleic acid ~~stabilising~~stabilizing agent into said vessel, and

d) testing the levels of mRNA,

wherein the first substance is the antigen.

26. (Currently amended) ~~The~~A method according to claim 25 where step d) further comprises the steps of :

e) forming a precipitate comprising nucleic acids,

f) separating said precipitate of step (e) from the supernatant,

g) dissolving said precipitate of step (f) using a buffer, forming a suspension,

h) isolating nucleic acids from said suspension of step (g) using an automated device,

i) dispersing/distributing a reagent mix for RT-PCR using an automated device,

j) dispersing/distributing the nucleic acids isolated in step (h) within the dispersed reagent mix of step (i) using an automated device, and,

k) determining the *in vivo* levels of transcripts using the nucleic acid/RT-PCR reagent mix of step (j) in an automated setup.

27. (Currently amended) ~~The~~A method according to ~~claims 25 and 26~~claim 25 wherein the immune response of an individual towards an antigen against which the individual has been pre-~~immunised~~immunized is tested, the first substance is the antigen under investigation and the levels of cytokine mRNA are tested.

28. (Currently amended) ~~The~~A method according to claim 27 wherein said cytokine is one or more selected from the group consisting of IL-2, IL-4, IL-13, and IFN-gamma.

29. (Currently amended) ~~The~~A method according to ~~claims 25 and 26~~claim 25 wherein the hyperallergenicity of an individual towards an antigen is tested, the first substance is the antigen under investigation and the levels of IL-4 mRNA are tested.

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30. (Currently amended) ~~The~~A method according to ~~claims 25 and 26~~claim 25 wherein the rejection of an organ transplant in an individual towards an antigen is tested, wherein the first substance is a histocompatibility antigen of the donor and the levels of IL-2 mRNA are tested.

31. (Currently amended) A method of testing RNA components in a stabilized blood sample comprising:

collecting a blood sample in the~~Use of a vessel according to any of claims 1 to 23 for~~claim 1;

pulsing a sample of blood with an antigen, subsequently inhibiting cellular RNA degradation and/or gene induction therein; and ~~subsequently~~ testing RNA components in the ~~stabilised~~stabilized blood sample so pulsed.

32. (Currently amended) A method of testing RNA components in a stabilized blood sample comprising: Use of a vessel according to any of claims 13 to 23 for

extracting a pre-determined volume sample of blood from an individual using said needle or ~~cannula~~cannula according to claim 9;

pulsing said sample with an antigen, subsequently inhibiting cellular RNA degradation and/or gene induction therein; and ~~subsequently~~ testing RNA components in the ~~stabilised~~stabilized blood sample so pulsed.

33. (Currently amended) A kit suitable for pulsing a liquid biological sample with a first substance, and subsequently introducing an agent that inhibits cellular RNA degradation and/or gene induction thereto, and testing mRNA components in the ~~stabilised~~stabilized blood sample so pulsed, said kit comprising:

- a) a vessel in which said first substance is present, and
- b) a container in which said agent is present.

34. (Currently amended) ~~The~~A kit according to claim 33 wherein the inside of said vessel and the inside of said container are connected, and a physical barrier temporarily blocks said connection.

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35. (Currently amended) TheA kit according to ~~claims 33 and 34~~claim 33 wherein said first substance is ~~immobilised~~immobilized on part or all of the inside surface of said vessel.

36. (Currently amended) TheA kit according to ~~any of claims 33 to 35~~claim 33 wherein said first substance is ~~immobilised~~immobilized on a solid support.

37. (Currently amended) TheA kit according to ~~any of claims 33 and 34~~claim 33 wherein said first substance is a liquid.

38. (Currently amended) TheA kit according to ~~any of claims 33 and 34~~claim 33 wherein said first substance is a solid.

39. (Currently amended) TheA kit according to ~~any of claims 33 to 38~~claim 33 wherein said vessel comprises one or more openings.

40. (Currently amended) TheA kit according to ~~any of claims 33 to 39~~claim 33 said vessel comprises one or more areas suitable for puncture by a syringe needle.

41. (Currently amended) TheA kit according to ~~any of claim 40~~ wherein said area is a re-sealable septum.

42. (Currently amended) TheA kit according to ~~any of claims 33 to 41~~claim 33 wherein said vessel comprises one or more fittings suitable for receiving a syringe and transmitting the contents therein to the interior of said vessel.

43. (Currently amended) TheA kit according to ~~any of claims 33 to 42~~claim 33 wherein said vessel comprises one or more fittings suitable for receiving a hypodermic syringe needle.

44. (Currently amended) TheA kit according to ~~any of claims 33 to 43~~claim 33 wherein said vessel comprises one or more ~~cannular~~cannulas suitable for withdrawing bodily fluids.

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45. (Currently amended) TheA kit according to ~~any of claims 33 to 44~~claim 33 wherein said vessel comprises one or more valves which are capable of ~~minimising~~minimizing the flow of liquid from the vessel, ~~minimising~~minimizing the flow of gas into or from the vessel, and/or allowing the flow of liquid biological sample into the vessel.

46. (Currently amended) TheA kit according to ~~any of claims 33 to 45~~claim 33 wherein said vessel comprises one or more means through which displaced gas may be expelled.

47. (Currently amended) TheA kit according to ~~any of claims 33 to 46~~claim 33 wherein said vessel is held under negative pressure.

48. (Currently amended) TheA kit according to ~~any of claims 33 to 47~~claim 34 wherein the physical barrier ~~of item d)~~ is opened by the application of physical force to said vessel.

49. (Currently amended) TheA kit according to claim 48 wherein said force transmits an opening means to said physical barrier.

50. (Currently amended) TheA kit according to ~~claims 48 and 49~~claim 48 wherein said force irreversibly opens said physical barrier.

51. (Currently amended) TheA kit according to ~~any of claims 33 to 50~~claim 33 wherein said vessel and/or container comprises an indication for dispensing a known volume of ~~stabilising~~stabilizing agent therein.

52. (Currently amended) TheA kit according to ~~any of claims 33 to 51~~claim 33 wherein said first substance comprises one or more immune system antigens.

53. (Currently amended) TheA kit according to claim 52 wherein said immune system antigens are vaccine components.

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54. (Currently amended) TheA kit according to claim 52 wherein said immune system antigens are antigens which provokes a hyperallergenic response.

55. (Currently amended) TheA kit according to claim 52 wherein said immune system antigens ~~are are selected from~~ one or more selected from the group consisting of histocompatibility antigens, bacterial LPS, tetanous toxoid, a cancer immunotherapy antigen, MAGE-3, a cat allergen, Feld1, antigen presenting cells from an organ donor, an autoantigen, and GAD65.

56. (Currently amended) TheA kit according to ~~any of claims 55 to~~ claim 55 wherein said inhibitor of cellular RNA degradation and/or gene induction is that as found in a PAXgeneTM Blood RNA Tube.

57. (Currently amended) TheA kit according to ~~any of claims 33 to 56~~ claim 33 for testing the immune response of an individual towards an antigen against which the individual has been pre-~~immunised~~ immunized wherein the first substance is the antigen under investigation and the mRNA tested is cytokine mRNA.

58. (Currently amended) TheA kit according to claim 57 wherein said cytokine is one or more selected from the group consisting of IL-2, IL-4, IL-13, and IFN-gamma.

59. (Currently amended) TheA kit according to ~~any of claims 33 to 56~~ claim 33 for testing an individual for hyperallergenicity towards an antigen wherein the first substance is the antigen under investigation and the mRNA tested is IL-4 mRNA.

60. (Currently amended) TheA kit according to ~~any of claims 33 to 56~~ claim 33 for testing an individual for rejection of an organ transplant wherein the first substance is a histocompatibility antigen of the donor and the mRNA tested is IL-2 mRNA.

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61. (Currently amended) TheA kit according to ~~ant of claims 33 to 60~~claim 33 further comprising one or more oligonucleotides suitable for said testing said mRNA(s).